

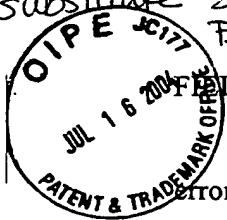
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Digital transmission method of the error correcting coding type

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FIELD OF THE INVENTION

The present invention concerns in general terms a digital transmission method of the error correcting coding type, notably for a system for digital transmission over a channel with a large amount of interference. More precisely, it concerns the interruption of the iterative decoding of a digital transmission method of the error correcting coding type using coding schemes of the turbo code type.

BACKGROUND OF THE INVENTION

A digital transmission system conveys information using a physical carver such as cable, optical fibre or propagation on a radio channel, satellite or otherwise. Such a physical medium will be referred to as a channel. Generally, such a system comprises in particular, on the sending side, a device referred to as a channel coder and, on the receiving side, a corresponding decoding device.

The channel coding device has a so-called error correcting coding function. The error correcting coding function consists of generating redundant information on sending which, during decoding at the destination, will make it possible to reconstitute the useful information transmitted, using the information arriving at its destination, referred to as the received information, affected by the disturbance occurring on the channel, notably of the noise, attenuation and interference type. A digital transmission method using such a channel coding associated with a corresponding destination decoding is referred to as a transmission method of the error correcting coding type.

For example, the coding operation takes place at the level of the bit. This operation associates with a binary sequence of useful information a binary sequence of corresponding coded information. This binary sequence of coded information is referred to as the code word when the size of the binary sequences of useful information is fixed. The binary sequence of coded information is of greater size than the binary sequence of useful information so as to introduce redundancy. Because of this redundancy, only certain coded information sequences, in accordance with the coding law, are possible. If received information sequences to be decoded are different from these possible sequences, it is because they correspond to information impaired by the channel. The role of the decoding method will